

I claim:

1. A method for generating a drawing of a network of at least one conductor and a plurality of connectors, which includes the steps:

A.) composing a schematic representation of said network showing said conductors linked together by said connectors,

- B) Compiling a list of available conductors including part name, vendor source, current capacity;
- C) Compiling a list of connector variables wherein each connector variable represents one of said network connectors, respectively;
- D) Matching each connector with a vendor part number determined by matching anticipated current in said network connector with current capacity of an available connector.
- E) Assigning to each connector variable a connector value wherein each connector value is at least one of
- connector coordinates defining location of said network connector;
 - connector type;
 - vendor part number;
 - anticipated current value through said network connector, respectively;
- F) Compiling a list of conductor variables wherein each conductor variable represents a conductor connecting one of said network connectors to another one of said network connectors;
- G) Assigning to each conductor variable at least one conductor value of a set of conductor values, each conductor value corresponding to one of:
- anticipated length of said respective conductor;
 - current anticipated in said conductor;

wire gage of said conductor;

type of said conductor;

H Creating a drawing of the network representing relative locations of network connectors and conductors connecting said network connectors wherein each network connector is labeled by a respective one of said connector variables and each conductor is labeled by a respective one of said conductor variables.

2. The method of claim 1 wherein said connector values include connector coordinates defining location of said network connector; and
said step G includes the step:

calculating said anticipated length from said connector coordinates.

3. The method of claim 2 wherein said conductor variable includes cost of said conductor; and

said method further includes the step:

I. compiling a vendor table listing type numbers of all available conductors, each one of said type numbers including current capacity and price per unit length of said available conductor, respectively; and

said step G comprises:

selecting each value of conductor type number by matching current capacity of one of said available conductors with anticipated current of said network conductor respectively;

calculating cost of said network conductor as equal to said anticipated length multiplied by said price per unit length of said available conductor.

4. The method of claim 3 wherein said connector variable includes said part number and price and the method further includes the step in operable order:

compiling a vendor table listing a part number and price of all available connectors, each one of said part numbers including operating data of said available connector, respectively; and

step D includes:

assigning, to each network connector variable, a part number and price of an available connector, from said vendor table whose current capacity equals said anticipated current through each said network connector, respectively.

5. The method of claim 4 wherein step G includes listing a price with each part number and the method includes the additional step, in operable order:

compiling a list of prices of all network connectors and conductors;

adding said list of prices whereby a cost of said network is provided.

6. The method of claim 2 wherein said method includes the step:

G. compiling a vendor table listing type numbers of all available conductors , each one of said type numbers including current capacity respectively; and

said step E comprises:

selecting said type number by matching type number of one of said available conductors with anticipated current of said network conductor to select type of said network conductor.

7. The method of claim 3 wherein said connector variable includes said part number and the method further includes the step in operable order:

H. compile a vendor table listing a part number for each of all available connectors with a detailed drawing of each available connector , each one of said part numbers including operating data of said available connector, respectively; and

step C includes:

assigning, to each network connector variable, a part number of an available connector, from said vendor table whose current capacity equals said anticipated current through each said network connector, respectively.

8. The method of claim 1 wherein at least one of said conductors is a shielded conductor and said list of values of said conductor variables includes characteristic impedance of said shielded conductor.

9. The method of claim 1 wherein at least one of said connectors is a connector for a shielded connector.

10. A computer program for generating a drawing of a network of at least one conductor and a plurality of connectors, which includes:

A. a table of connector variables, each connector variable corresponding to one of said network connectors, respectively, each said network variable is a list of values, said list of values including at least one of a network connector identification number, an anticipated current load through said connector, coordinates specifying location of said network connector;

B. a table of available connectors including a part number and specifications for each available connector;

C. an instruction to display on a monitor of said computer an instruction to select from said table of available connectors part numbers of available connectors having specifications matching specifications of said network connectors and store those selected part numbers as said values of variables in said table of network connectors;

D. a table of conductor variables, each conductor variable corresponding to one of said network conductors, respectively, each said conductor variable including a list of values, said list of values including at least one of a network conductor identification number, an anticipated current load through said network conductor, network connectors to which said network conductor is connected ;

E. a table of available conductors listing type number and parameters of each available conductor;

F. an instruction to display said table of available conductors and said table of network conductors for display on said monitor of said computer;

G. an instruction for display on said monitor an instruction to select from said table of available conductors, those available conductors having specifications matching specifications of said network conductors and adding type numbers of selected available conductors to said table of network conductors;

H. an instruction to display said table of network conductors and said table of network connectors on said monitor of said computer;

I. an instruction to calculate a length of each network conductor from said location of respective network connectors and storing said calculated length with said type and parameters of said respective network conductor in said table of network conductors;

J. a configure module arranged to apply said location data of each said network connector and said length calculated for each said network conductor to generate a representation of a drawing of said network;

K. an instruction to generate a drawing of said network for display on a monitor of said computer.

11. The program of claim 10 written in hyper text Preprocessor providing that said program will run on a 386 processor or a higher end SMP server and is cross platform to a Unix platform and Windows NT.

12. The program of claim 10 wherein specifications of each connector listed in said table of available connectors includes a part number and specifications for each available connector;

13. The program of claim 10 wherein said instruction to display on said monitor an instruction to select from said table of available conductors, those available conductors having specifications matching specifications of said network conductors is an instruction to display a pull down menu of available conductors, any one of said available conductors being selectable with an electronic pointer, and

said instruction to display on said monitor an instruction to select from said table of available connectors, those available conductors having specifications matching specifications of said network connectors is an instruction to display a pull down

menu of available connectors, any one of said available connectors being selectable with said electronic pointer.

14 The program of claim 10 which further includes compiling a bill of materials being a list of all selected connectors and conductors.

15. The program of claim 10 wherein each said parameter includes a price per unit of length of said conductor and said specification of each network connector includes a price of said network and said program includes:

an instruction to sum costs of said network connectors to obtain a total cost of said network connectors ;

an instruction to multiply each length of said network conductors by price per unit length of said respective conductor providing a cost of each network conductor;

an instruction to add all costs of all said network connectors providing a total cost of said network connectors;

an instruction to add said cost of said network conductors to said cost of said network connectors providing a total cost of said network;

displaying said total cost with said drawing.

16. The program of claim 10 wherein said instruction G. includes a search engine module arranged to match specifications of said network connectors with specifications of said available connectors listed in said table of available connectors.

17. The program of claim 16 wherein said specifications include at least one of subsets wherein each subset is a regional data base belonging to a major category and said search engine is arranged to search according to a selected major category.

18. The program of claim 17 wherein said major category is at least one of a sex of the connector, a bulkhead, right angle, female, flange, P.C. mount, etc.

19. The program of claim 16 wherein said search engine searches a data base identified by said specifications to select an appropriate conductor.

20. The program of claim 18 wherein said search for an appropriate conductor includes selecting a desired branch of said network.

21. The program of claim 10 wherein said step H includes the step

listing in a main menu bar a menu of detailed drawings of connectors;

displaying said menu permitting a user to select a connector and a drawing depicting the connector to be added to said drawing.

22. The program of claim 10 written in Hyper text Preprocessor language providing that the program will run on a 386 processor or a higher end SMP server, is cross platform to any Unix platform and Windows NT.

23. A method for enabling a client accessible to a client computer to communicate with a server computer to generate a drawing of a network of at least one conductor and a plurality of connectors which includes the steps:

A. Connecting said server computer to an internet provider connected to said client computer;

B. Install in said client computer a browser program for communication with said server computer;

C. Install on said server computer a program which includes:

a table of connector variables, each connector variable corresponding to one of said network connectors, respectively, each said network variable is a list of values, said list of values including at least one of a network connector identification number, an anticipated current load through said connector, coordinates specifying location of said network connector and store those selected part numbers as said values of variables in said table of network connectors;

a table of conductor variables, each conductor variable corresponding to one of said network conductors, respectively, each said conductor variable including a list of values, said list of values including at least one of a network conductor identification number, an anticipated current load through said network conductor, network connectors to which said network conductor is connected ;

a table of available conductors listing type number and parameters of each available conductor;

a table of available connectors including a part number and specifications for each available connector;

an instruction to transmit to said browser said table of available connectors and said table of network connectors;

an instruction for transmission to said browser to display on said client computer an instruction to select from said table of available connectors part numbers of available connectors having specifications matching specifications an instruction to transmit to said browser said table of available conductors and said table of network conductors for display on said client computer;

an instruction for display to said client an instruction directing said client to select from said table of available conductors, those available conductors having specifications matching specifications of said network conductors and adding type numbers of selected available conductors to said table of network conductors;

an instruction to said browser to transmit said table of network conductors and said table of network connectors from said client computer back to said server computer;

an instruction to calculate a length of each network conductor from said location of respective network connectors and storing said calculated length with said type and parameters of said respective network conductor in said table of network conductors;

a configure module arranged to apply said location data of each said network connector and said length calculated for each said network conductor to generate a representation of a drawing of said network;

an instruction transmitting said representation of a drawing to said browser whereby said browser generates a drawing of said network for display on a monitor of said client computer.

D. transmitting from said client computer through said browser to said server computer an instruction to initiate said program;

Adding selected part numbers of available connectors and type numbers of available conductors to said tables of network connectors and conductors respectively in

response to prompt displayed by said client computer in response to which, said drawing of said network is displayed by said client computer.

24 The method of claim 23 wherein said instruction to display to said client an instruction directing said client to select from said table of available conductors, those available conductors having specifications matching specifications of said network conductors and adding type numbers of selected available conductors to said table of network conductors comprises using an electronic pointer applied to said monitor of said computer to select said available conductor.

25. The method of claim 23 wherein each said parameter includes a price per unit of length of said conductor and said specification of each network connector includes a price of said network and said program includes:

an instruction to sum costs of said network connectors to obtain a total cost of said network connectors ;

an instruction to multiply each length of said network conductors by price per unit length of said respective conductor providing a cost of each network conductor;

an instruction to add all costs of all said network connectors providing a total cost of said network connectors;

an instruction to add said cost of said network conductors to said cost of said network connectors providing a total cost of said network;

transmitting said total cost to said browser for displaying said total cost with said drawing.

26. The method of claim 23 wherein said program includes an instruction to compile a bill of materials being a list of all network connectors and network conductors and display said bill of materials on said client monitor.

27. The method of claim 23 wherein said program is presented to said browser in Extensible Hyper Text Mark-up Language.

28. The method of claim 23 wherein said program is written in PHP hyper Text Preprocessor language.

29. A program installable on a server computer for enabling a client accessible to a client computer to communicate with said server computer to generate a drawing of a network of at least one conductor and a plurality of connectors, said program comprising:

a table of connector variables, each connector variable corresponding to one of said network connectors, respectively, each said network variable is a list of values, said list of values including at least one of a network connector identification number, an

anticipated current load through said connector, coordinates specifying location of said network connector;

of said network connectors and store those selected part numbers as said values of variables in said table of network connectors;

a table of conductor variables, each conductor variable corresponding to one of said network conductors, respectively, each said conductor variable including a list of values, said list of values including at least one of a network conductor identification number, an anticipated current load through said network conductor, network connectors to which said network conductor is connected ;

a table of available conductors listing type number and parameters of each available conductor;

a table of available connectors including a part number and specifications for each available connector;

an instruction to transmit to said browser said table of available connectors and said table of network connectors;

an instruction for transmission to said browser to display on said client computer an instruction to select from said table of available connectors part numbers of available connectors having specifications matching specifications an instruction to transmit to said browser said table of available conductors and said table of network conductors for display on said client computer;

an instruction for display to said client an instruction directing said client to select from said table of available conductors, those available conductors having specifications matching specifications of said network conductors and adding type numbers of selected available conductors to said table of network conductors;

an instruction to said browser to transmit said table of network conductors and said table of network connectors from said client computer back to said server computer;

an instruction to calculate a length of each network conductor from said location of respective network connectors and storing said calculated length with said type and parameters of said respective network conductor in said table of network conductors;

a configure module arranged to apply said location data of each said network connector and said length calculated for each said network conductor to generate a representation of a drawing of said network;

an instruction transmitting said representation of a drawing to said browser whereby said browser generates a drawing of said network for display on a monitor of said client computer.

D. transmitting from said client computer through said browser to said server computer an instruction to initiate said program;

Adding selected part numbers of available connectors and type numbers of available conductors to said tables of network connectors and conductors respectively in response to prompt displayed by said client computer in response to which, said drawing of said network is displayed by said client computer.

29. The program of claim 28 further comprising an instruction to compile a bill of materials being a list of all network connectors and network conductors and display said bill of materials on said client monitor.

30. The program of claim 29 wherein said table of available connectors and said table of available conductors includes for each available connector and each available conductor a delivery date for said respective available conductor and connector and said program includes an instruction transmitted to said browser to print a schedule of said delivery dates.

31. A method for generating a drawing of a network of at least one interconnect and a plurality of components which includes the steps:

A) Composing a schematic representation of said network showing said interconnects linked together by said components;

B). Compiling a list of available components including part name, vendor source, load capacity;

C) Compiling a list of component variables wherein each component variable represents one of said network components, respectively;

D) Matching each component with a vendor part number determined by matching anticipated load in said network component with current capacity of an available component.

E) Assigning to each component variable a component value wherein each component value is at least one of

component coordinates defining location of said network component;

component type;

vendor part number;

anticipated capacity value of said network component, respectively;

F) Compiling a list of interconnect variables wherein each interconnect variable represents an interconnect connecting one of said network components to another one of said network components;

G) Assigning to each interconnect variable at least one interconnect value of a set of interconnect values, each interconnect value corresponding to one of:

anticipated length of said respective interconnect;

current anticipated in said interconnect;

size of said interconnect;

type of said interconnect;

H Creating a drawing of the network representing relative locations of network components and interconnectors connecting said network components wherein each network component is labeled by a respective one of said component variables and each connector is labeled by a respective one of said interconnect variables.

33

32. The method of claim 31 wherein said component values include component coordinates defining location of said network component; and
said step G includes the step:

calculating said anticipated size from said connector coordinates.

34

33. The method of claim 32 wherein said interconnect variable includes cost of said interconnect ; and

said method further includes the step:

I. compiling a vendor table listing type numbers of all available interconnects , each one of said type numbers including capacity and price of said available interconnect, respectively; and

said step G comprises:

selecting each value of interconnect type number by matching current capacity of one of said available interconnects with anticipated load of said network conductor respectively;

calculating cost of said network interconnect;

34. The method of claim 33 wherein said component variable includes said part number and price and the method further includes the step in operable order:

J. compiling a vendor table listing a part number and price of all available components, each one of said part numbers including operating data of said available component, respectively; and

step D includes:

assigning, to each network component variable, a part number and price of an available component, from said vendor table.

35. The method of claim 34 wherein step G includes listing a price with each part number and the method includes the additional step, in operable order:

compiling a list of prices of all network components and interconnects;

adding said list of prices whereby a cost of said network is provided.

36. The method of claim 31 wherein said method includes the step:

compiling a vendor table listing type numbers of all available interconnects, each one of said type numbers; and

said step E comprises:

selecting said type number by matching type number of one of said available interconnects with anticipated current of said network interconnect to select type of said network interconnect.

37. The method of claim 33 wherein said component variable includes said part number and the method further includes the step in operable order:

compile a vendor table listing a part number for each of all available components with a detailed drawing of each available connector, each one of said part numbers including operating data of said available component, respectively; and

step C includes:

assigning, to each network component variable, a part number of an available component, from said vendor table whose current capacity equals said anticipated current through each said network connector, respectively.

38. A computer program for generating a drawing of a network of at least one interconnect and a plurality of components, which includes:

A. a table of component variables, each component variable corresponding to one of said network components, respectively, each said network variable is a list of values, said list of values including at least one of a network component

identification number, an anticipated size required by said component, coordinates specifying location of said network component;

B. a table of available components including a part number and specifications for each available component;

C. an instruction to display on a monitor of said computer an instruction to select from said table of available components, part numbers of available components having specifications matching specifications of said network components and store those selected part numbers as said values of variables in said table of network components;

D a table of interconnect variables, each interconnect variable corresponding to one of said network interconnects, respectively, each said interconnect variable including a list of values, said list of values including at least one of a network interconnect identification number, an anticipated size required by said network interconnect, network components to which said network interconnect is connected ;

E. a table of available interconnects listing type number and parameters of each available interconnect;

F. an instruction to display said table of available interconnects and said table of network interconnects for display on said monitor of said computer;

G. an instruction for display on said monitor an instruction to select from said table of available interconnects, those available interconnects having specifications matching specifications of said network interconnects and adding type numbers of selected available interconnects to said table of network interconnects;

H. an instruction to display said table of network interconnects and said table of network components on said monitor of said computer;

I. an instruction to generate a drawing of said network for display on a monitor of said computer.

39. The program of claim 38 written in hyper text Preprocessor providing that said program will run on a 386 processor or a higher end SMP server and is cross platform to a Unix platform and Windows NT.

40. The program of claim 41 wherein specifications of each component listed in said table of available components includes a part number and specifications for each available component.

42. The program of claim 38 wherein said instruction to display on said monitor an instruction to select from said table of available interconnects, those available interconnects having specifications matching specifications of said network interconnects is an instruction to display a pull down menu of available interconnects, any one of said available interconnects being selectable with an electronic pointer, and

said instruction to display on said monitor an instruction to select from said table of available components, those available components having specifications matching specifications of said network components is an instruction to display a pull down menu of available components, any one of said available components being selectable with said electronic pointer.

43 The program of claim 38 which further includes compiling a bill of materials being a list of all selected components and interconnects.

44. The program of claim 38 wherein each said parameter includes a for each said conductor and said specification of each network component includes a price of said network and said program includes:

an instruction to sum costs of said network components to obtain a total cost of said network components ;

an instruction to provide a cost of each network interconnect;

an instruction to add all costs of all said network components providing a total cost of said network components;

an instruction to add said cost of said network interconnects to said cost of said network components providing a total cost of said network;

displaying said total cost with said drawing.

44. The program of claim 38 wherein said instruction G. includes a search engine module arranged to match specifications of said network components with specifications of said available components listed in said table of available components.

45. The program of claim 44 wherein said specifications include at least one of subsets wherein each subset is a regional data base belonging to a major category and said search engine is arranged to search according to a selected major category.

46. The program of claim 44 wherein said search engine searches a data base identified by said specifications to select an appropriate conductor.

47. The program of claim 18 wherein said search for an appropriate conductor includes selecting a desired branch of said network.

48. The program of claim 38 wherein said step H includes the step

listing in a main menu bar a menu of detailed drawings of computers;

displaying said menu permitting a user to select a component and a drawing depicting the component to be added to said drawing.

49. The program of claim 38 written in Hyper text Preprocessor language providing that the program will run on a 386 processor or a higher end SMP server, is cross platform to any Unix platform and Windows NT.

50. A method for enabling a client accessible to a client computer to communicate with a server computer to generate a drawing of a network of at least one interconnect and a plurality of components which includes the steps:

A Connecting said server computer to an internet provider connected to said client computer:

B. Install in said client computer a browser program for communication with said server computer;

C Install on said server computer a program which includes:

a table of component variables, each component variable corresponding to one of said network components, respectively, each said network variable is a list of values, said list of values including at least one of a network component identification number, an anticipated size required by said connector, coordinates specifying location of said network component and store those selected part numbers as said values of variables in said table of network components;

a table of interconnect variables, each interconnect variable corresponding to one of said network interconnects, respectively, each said interconnect variable including a list of values, said list of values including at least one of a network interconnect identification number, network components to which said network component is connected ;

a table of available interconnects, listing type number and parameters of each available interconnect;

a table of available components including a part number and specifications for each available component;

an instruction to transmit to said browser said table of available components and said table of network components;

an instruction for transmission to said browser to display on said client computer an instruction to select from said table of available components, part numbers of available components having specifications matching specifications an instruction to transmit to said browser said table of available interconnects and said table of network interconnects for display on said client computer;

an instruction for display to said client an instruction directing said client to select from said table of available interconnects, those available interconnects having specifications matching specifications of said network conductors and adding type numbers of selected available interconnects to said table of network interconnects;

an instruction to said browser to transmit said table of network interconnects and said table of network components from said client computer back to said server computer;

an instruction to calculate a size of each network interconnect from said location of respective network component and storing said calculated size with said type and parameters of said respective network interconnect in said table of network interconnect;

a configure module arranged to apply said location data of each said network component and said size calculated for each said network interconnect to generate a representation of a drawing of said network;

an instruction transmitting said representation of a drawing to said browser whereby said browser generates a drawing of said network for display on a monitor of said client computer.

D. transmitting from said client computer through said browser to said server computer an instruction to initiate said program;

Adding selected part numbers of available components and type numbers of available interconnects to said tables of network components and, interconnects respectively in response to prompt displayed by said client computer in response to which, said drawing of said network is displayed by said client computer.

51 The method of claim 50 wherein said instruction to display to said client an instruction directing said client to select from said table of available interconnects, those available interconnects having specifications matching specifications of said network interconnects and adding type numbers of selected available interconnects to said table of network interconnects comprises using an electronic pointer applied to said monitor of said computer to select said available interconnect.

52. The method of claim 50 wherein each said parameter includes a unit price of said interconnect and said specification of each network component includes a price of said network and said program includes:

an instruction to sum costs of said network components to obtain a total cost of said network components;

an instruction to provide a cost of each network interconnect;

an instruction to add all costs of all said network components providing a total cost of said network components;

an instruction to add said cost of said network interconnects to said cost of said network components providing a total cost of said network;

transmitting said total cost to said browser for displaying said total cost with said drawing.

53. The method of claim 50 wherein said program includes an instruction to compile a bill of materials being a list of all network components and network interconnects and display said bill of materials on said client monitor.

54. The method of claim 50 wherein said program is presented to said browser in. Extensible Hyper Text Mark-up Language.

55. The method of claim 50 wherein said program is written in PHP hyper Text Preprocessor language.

56. A program installable on a server computer for enabling a client accessible to a client computer to communicate with said server computer to generate a drawing of a network of at least one conductor and a plurality of connectors, said program comprising:

a table of component variables, each component variable corresponding to one of said network components, respectively, each said network variable is a list of values, said list of values including at least one of a network component identification number, an anticipated current load through said component, coordinates specifying location of said network component of said network components and store those selected part numbers as said values of variables in said table of network components;

a table of interconnect variables, each interconnect variable corresponding to one of said network interconnects, respectively, each said interconnect variable including a list of values, said list of values including at least one of a network interconnect identification number, an anticipated size required by said network interconnect, network components to which said network interconnect is connected

a table of available interconnects listing type number and parameters of each available interconnect;

a table of available components including a part number and specifications for each available component;

an instruction to transmit to said browser said table of available connectors and said table of network connectors;

an instruction for transmission to said browser to display on said client computer an instruction to select from said table of available components part numbers of available components having specifications matching specifications an instruction to transmit to said browser said table of available interconnects and said table of network interconnects for display on said client computer;

an instruction for display to said client an instruction directing said client to select from said table of available interconnects, those available interconnects having specifications matching specifications of said network interconnects and adding

type numbers of selected available interconnects to said table of network interconnects;

an instruction to said browser to transmit said table of network interconnects and said table of network components from said client computer back to said server computer;

an instruction to calculate a price of each network interconnect from said type and parameters of said respective network interface in said table of network interconnects;

a configure module arranged to apply said location data of each said network component to generate a representation of a drawing of said network;

an instruction transmitting said representation of a drawing to said browser whereby said browser generates a drawing of said network for display on a monitor of said client computer.

D. transmitting from said client computer through said browser to said server computer an instruction to initiate said program;

Adding selected part numbers of available components and type numbers of available interconnects to said tables of network components and interconnects respectively in response to prompt displayed by said client computer in response to which, said drawing of said network is displayed by said client computer.

57. The program of claim 56 further comprising an instruction to compile a bill of materials being a list of all network components and network interconnects and display said bill of materials on said client monitor.

58. The program of claim 57 wherein said table of available components and said table of available interconnects includes for each available component and each available interconnect a delivery date for said respective available interconnect and component and said program includes an instruction transmitted to said browser to print a schedule of said delivery dates.